ANTON

FLOWLAB plus

USER MANUAL

PLEASE READ THROUGH ALL INSTRUCTIONS BEFORE USE
ANY FURTHER QUESTIONS PLEASE CALL OUR
TECHNICAL HELP LINE: 0870 428 0075

CONTENTS

Page 2 - Unpacking

Page 3 - Heating system preparation and tips

Page 4 - Connections and controls

Page 6 - Connecting to heating system

Page 7 - Power flushing procedure

Page 9 - Technical data and safety

Page 10 - Spares and accessories

UNPACKING

Thank you for purchasing the Flowclean Plus power flushing and descaling pump, designed to flush central heating systems and remove sludge, corrosion and scale build-up, curing circulation problems and unwanted boiler noise, leaving a more efficient and protected heating system.

Please carefully remove your Flowclean Plus from the packaging and check the contents as follows:

- Flowclean Plus pump with transport trolley
- Carry case for hoses and fittings
- Magnetic inline filter (Supameg Compact)
- System connection fitting kit and chemical funnel
- Quick guide instructions
- 2 x 3 metre flow and return hoses
- 2 x 3 metre dump and overflow hoses

Any shortages should be reported in writing direct to Anton within 3 days of receipt
Additional spares and accessories are available, see page 10

HEATING SYSTEM PREPARATION AND TIPS

Always run heating system prior to power flushing to establish the problem areas such as cold spots on radiators or slow circulation, you can then make sure the strongest concentration of chemicals are directed to these problem areas.

Before power flushing the system it is important to check the following:

All radiator valves are fully open, both sides of radiator. Thermostatic rad valve heads should be removed and check the pins are not stuck down. Isolate electrical supply to circulating pump, regardless of whether or not this is the location for connecting the Flowclean pump to the heating system.

Check that all zone valves are set to manual open and that if any anti-gravity check valves are fitted to the system, these are temporarily removed or by-passed to allow flow reversing action to be used, any bypass should also be closed.

When flushing a vented system you will need to cap off both the cold feed and vent to avoid overflowing of the feed and expansion tank, in some cases you can create a temporary loop, connecting cold feed and vent together, which will then include these pipes in the flushing process.

Please do note that capping off or looping pipes, by-passing check valves etc are temporary measures and will need to be reinstated after the power flushing procedure is finished.

The dump hose should run into a foul sewer; a toilet, gully or drain are commonly used.
Care should be taken as contaminated water may well stain different surfaces.

During the dumping process, if the mains water going in via the cold water inlet tap cannot keep up with what is being dumped out, stop dumping and allow water to return to required level: Do not adjust or restrict dump valve to try and compensate.

Handy tips

Your Flowclean pump is compatible with all approved chemicals, however it is important to make sure the correct chemicals are being used on the system you are working on, take care and read through chemical instructions carefully, aluminium heat exchangers, galvanised or stainless steel pipes will dictate which chemicals are suitable.

If an acid based descaler is used then the system, including the Flowclean pump must be neutralised with the suggested neutralising agent prior to the final flush through with cold water.

At all times during the flushing procedure the tank filling cap must be left off in order to allow the exhaust of acidic vapour created by the cleaning process.

Maintain vigilance on the amount of foam produced. Do not overfill the tank by exceeding the maximum level marked clearly on the side of the tank. It is good practise to use waterproof dust sheets and replace end caps on hoses after use to prevent any unwanted spillages.

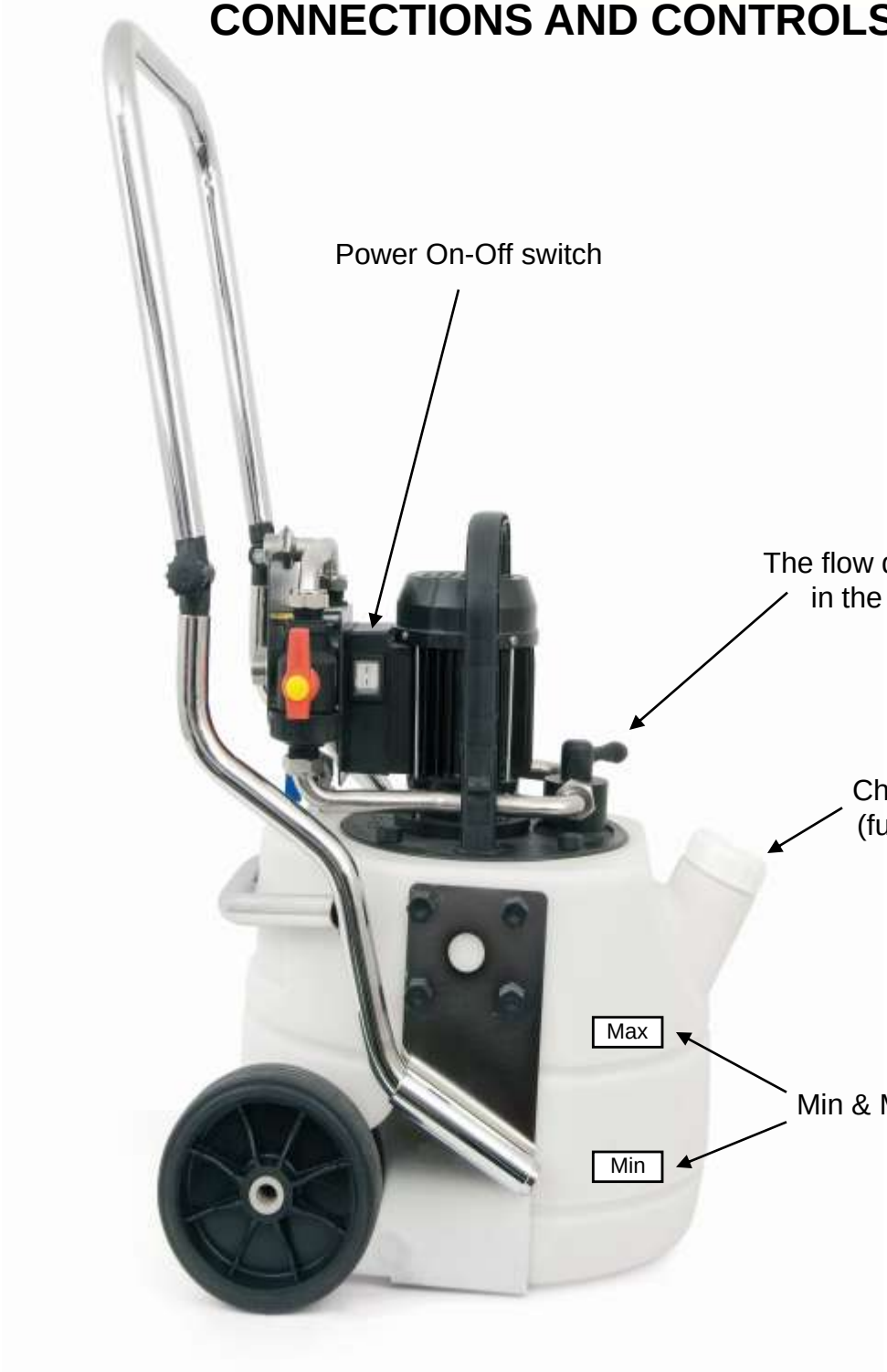
In order to maintain continued flushing pump efficiency and reliability, it is of paramount importance that all equipment is thoroughly washed with clean water after every use.

The flow diverter valve is situated on the top of the tank directly over the chemical fill point, the lever when in the correct position points in the flow direction set. (See page 5 for further detail)

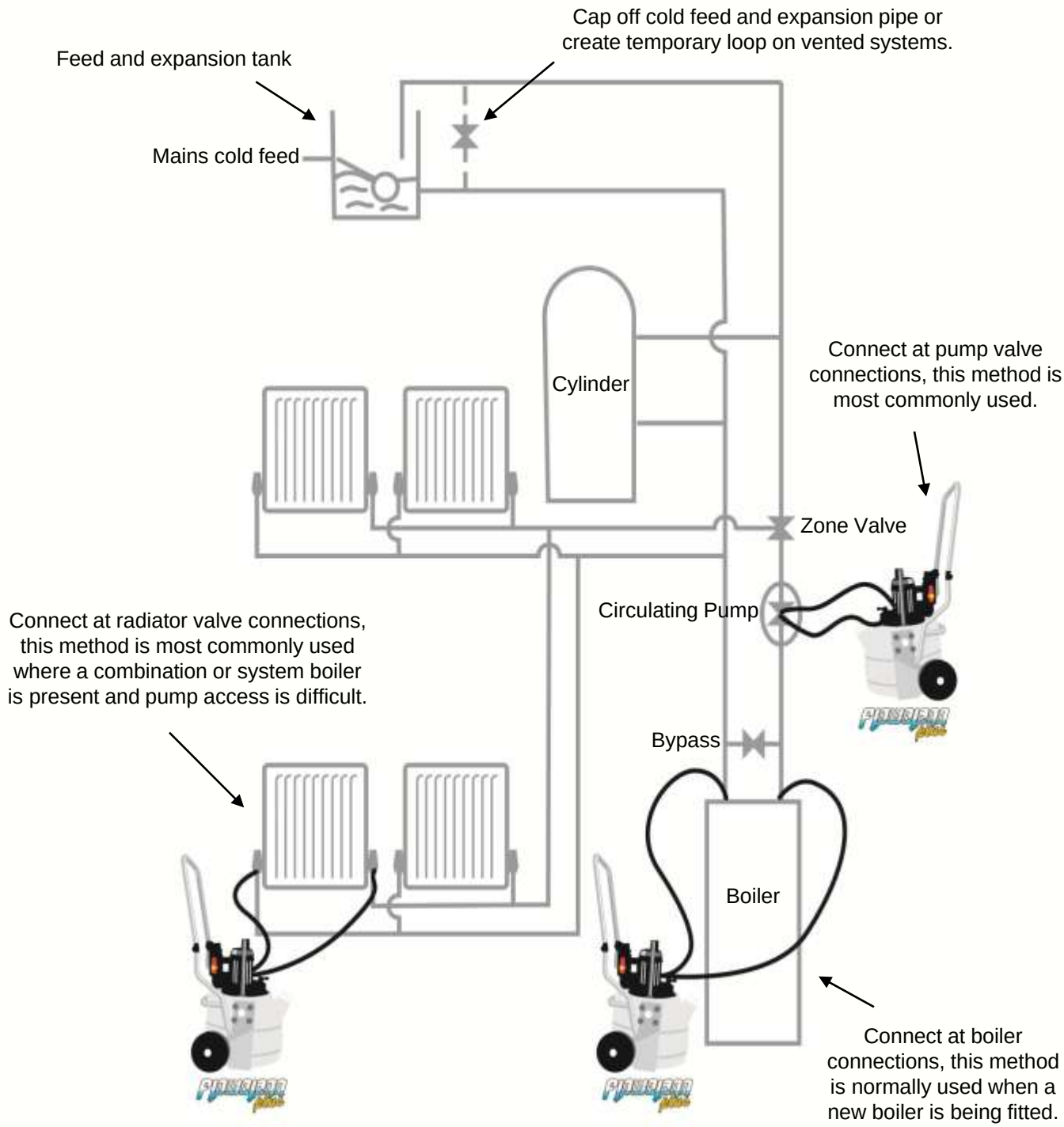
CONNECTIONS AND CONTROLS

Return hose connection
3 position valves
Dump - Upward
Closed - Horizontal
Recirculate - Downward
Please note correct position of drain tap on magnetic filter, fitted using swivel coupling supplied to the return hose connection (right hand side)

CONNECTIONS AND CONTROLS


Power On-Off switch
The flow diverter valve points in the direction of flow
Chemical fill point (funnel provided)
Max
Min
Min & Max level indicators

CONNECTING TO HEATING SYSTEM


Cap off cold feed and expansion pipe or create temporary loop on vented systems.
Feed and expansion tank
Mains cold feed
Cylinder
Connect at pump valve connections, this method is most commonly used.
Zone Valve
Circulating Pump
Connect at radiator valve connections, this method is most commonly used where a combination or system boiler is present and pump access is difficult.
Bypass
Boiler
Connect at boiler connections, this method is normally used when a new boiler is being fitted.

POWER FLUSHING PROCEDURE

Please note: Supameg Magnetic in-line filter maintenance

During the cleaning process you will need to keep your eye on the in-line magnetic filter as this will attract iron oxide particles during the procedure and gradually become choked. To empty simply turn off power switch to unit, set right hand valve (return) to closed position (make sure flow direction of water is returning down the return hose) remove the magnet from top of the filter, open the small drain tap over bucket with small length of hose attached, turn on power switch and drain debris into bucket. Once completed turn off power switch, close drain tap, replace magnet, set right hand valve (return) back to recirculate and continue with cleaning procedure. **(Please refer to instructions provided with Supameg for further information on use).**

Step 1) System preparation

Isolate power to heating. If the system to be cleaned is vented, firstly you will need to cap off the cold feed and the vent pipe or create a temporary loop. These will obviously need to be reinstated after power flushing. (See page 3 for further detail).

Step 2) Flowclean connection

Connect your Flowclean pump to the heating system, most commonly done at the circulating pump or by taking off a conveniently positioned radiator. Connect all hoses, flow & return, dump, overflow, cold water inlet and magnetic filter, isolate power to circulating pump (see pages 3 & 6 for further detail).

Step 3) Valve preparation

To ensure maximum flow rate throughout the system, open all the radiator valves and set any zone valves to manual open. Check for anti-gravity check valves (see page 3 for further detail).

Step 4) Start cleaning

Firstly make sure your tank is approximately 5cm above minimum level indicator with clean water, using the water inlet tap. Make sure both valves are set to recirculate, now you can switch on your Flowclean pump. Leave circulating for approximately 15 minutes, regularly reversing the flow.

Step 5) Dump procedure

Now dump initial contaminated water from system. Set right hand valve (return) to dump position whilst making sure your water inlet balances with what you are dumping out, maintain water level in other words. Continue dumping until dump water runs clear.

Step 6) Back to recirculation & adding chemical

Now set right hand valve (return) back to recirculate and turn off water inlet valve, continue to recirculate with all radiator valves open. Now add flushing chemicals to system using your chemical funnel on the front of your tank.

Step 7) Heating water

To assist with the power flushing process (if achievable) fire up the boiler and heat water to approximately 50ºC, (**making sure that electrical supply to pump has been isolated**) be sure not to leave boiler on continuously. Continue to recirculate water through the whole system for a further 15 minutes, regularly reversing the flow.

POWER FLUSHING PROCEDURE

Step 8) Individual radiator cleaning

For best results all radiators should now be cleaned individually. Turn off all radiator valves on system apart from furthest radiator, continue to recirculate through individual radiator for 5-10 minutes, regularly reversing the flow. (obviously always making sure at least one radiator is fully open at any one time).

Step 9) Individual radiator cleaning continued

Now turn off furthest radiator and move to next one, repeating (Step 8) on all radiators, working your way back toward your Flowclean Plus. Once completed turn off boiler if you haven't already done so.

Step 10) Individual radiator dump

Once all radiators have been individually cleaned then start dumping individual radiators in reverse of how you cleaned them. Again make sure you maintain water level and continue dumping each radiator until dump water runs clear as in (Step 5).

Step 11) Neutralising system

After the dumping process is complete, turn valves back to recirculate on Flowclean pump and turn off water inlet tap. Make sure all radiators are now open, to return to full system circulation. Now add neutralising agent to system, again using your chemical funnel on the front of your tank. Leave circulating around full system for 15 minutes.

Step 12) Final dump procedure and pH test

With all radiators still open complete final dump procedure (as in Step 5), maintaining water level and continue dumping until dump water runs clear or for approximately 10 - 15 minutes. You will now need to test the pH levels to check dump water is now neutral, this should read the same as a sample from the mains water supply to the building. pH paper or electronic pH meters can be used.

Step 13) Adding inhibitor / system protector

You can now add your inhibitor / protector to the system, either using your chemical funnel at the front of your tank or injecting into a radiator or open pump valve. (Please note you may need to drain a little water out of system to achieve this).

Step 14) Final procedure

Leave your Flowclean pump circulating for a further 10 minutes before disconnecting it and returning system back to normal, in other words reinstate cold feed and vent pipe, make sure feed and expansion tank is cleaned, replace pump or radiator, fully vent and test system, check for leaks and return all valves to original position.

TECHNICAL DATA AND SAFETY

Dimensions: W43 x D48 x H56 (cm)
Weight: 18 KG with transport trolley
Tank capacity: 37 litres
Compatible with all approved chemicals
Working fluid temperature up to 70ºC
Efficient cleaning up to 20 radiators
Flow rate: 5,400 ltrs/hr max
0.45 HP motor with IP54 protection
Max working head: 2bar

In order to maintain continued flushing pump efficiency and reliability it is of paramount importance that all equipment is thoroughly washed with clean water after every use.

12 Months parts and labour warranty subject to fair wear and tear and no misuse.

The manufacturer and distributor reserve the right, that in the event of a fault claim they will repair or replace accordingly at their discretion.

NOTE: - These notes are for guidance only and in no way will any claims for any damages be entered into in any way whatsoever, however caused.

SAFETY TIPS

As with all large or heavy goods, care should be taken to prevent injury.
Always follow safety guidelines laid out in the chemical manufactures instructions.
It is recommended that a RCD (residual circuit device) is used.
Regular inspection of power lead and plug is strongly recommended.

SPARES AND ACCESSORIES

Order code:	Description:
AFEH kit	3mtr hose extension kit with straight connector and end caps
AFHEA	Plate heat exchanger adaptor
AFPHA	Circulating pump head adaptor
AIRG	Laser infra-red digital thermometer with belt pouch
AA15/HDH	Liquid probe (can be used with AIRG thermometer above)
Bahco 2971G	Pump valve Plier

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